**Name: Date:**

**Task 1 - Energy auditing a computer system & recommend how sustainability can be integrated into an upgrade**



Instruction

• Gather information to prepare the installation of an energy measuring device on a computer system

• Prepare for the installation of the device

• Configure and test the device

• Complete and document installation and test results

• Evaluate opportunities to integrate sustainable ICT projects and reduce energy consumption

**Project Resources**

Current Cost EnviR Energy Monitor

Warning: Installation is simple yet if you are in Australia, for liability reasons it is required to be carried out by a qualified electrician when in in a power switchboard.

* <http://www.smartnow.com.au/installinstructions.php>
* <http://www.smartnow.com.au/current_cost_bridge.php>

**Theory**

Complete the following notes:

1. Q: Does the Current Cost EnviR Energy Monitor comply with Electrical Safety Standards?

ANSWER: **Yes**

1. Advise how you prepared the installation of Current Cost EnviR Energy Monitor

ANSWER: **Use the power supply fire wire pass through the sensor clamp**

**Plug in the sensor power supply and power on**

**Plug in the display unit power supply and power on.**

1. Advise how you configured and tested the Current Cost EnviR Energy Monitor

ANSWER: **Use the power supply fire wire pass through the sensor clamp**

**Plug in the sensor power supply and power on**

**Plug in the display unit power supply and power on.**

1. Advise how you could document the installation and energy audit

(see <http://my.currentcost.com/>)

ANSWER: : Record the electrical power consumption while testing on the pc, server, and thin client,

**Practicum**

* **Identify power consumption of a computer system under different operating conditions using the Current Cost EnviR Energy Monitor and appropriate power lead or similar energy meter.**
* **Recommendations on upgrading computer system.**

1. Record power consumption and notes e.g. range, variability, operating conditions:

|  |  |  |
| --- | --- | --- |
| **Condition** | **PC power consumption**  **(watts)** | **Notes** |
| **OFF** | 27 |  |
| **MAX BOOT** | 93 |  |
| **IDLE** | 76 |  |
| **Wordprocessing** | 77 |  |
| **Spreadsheets** | 77 |  |
| **Web browsing**  <http://news.bbc.co.uk/2/hi/programmes/click_online/default.stm> | 70 |  |
| **Low level music**  <http://grooveshark.com/#/s/Fall+At+Your+Feet/3KIZB0?src=5> | 78 |  |
| **Low level video**  <http://www.joost.com/39w1yk49/#/?video_info=33p1yw1t> | 92 |  |
|  |  |  |

1. Evaluate the extent to which sustainability could be integrated into an upgrade of the computer system. Advise your recommendations: